What is claimed is

1. A method for monitoring hormone concentration in a mammal, comprising:

(i) receiving a serum sample from the mammal;

(ii) measuring the concentration of insulin, estrogen, testosterone, and sex hormone-binding globulin in the serum; and

(iii) determining an F factor;

wherein determining the F factor for a female mammal is performed with the equation

$F_f = (E \times S \times Q) / N$;

wherein determining the F factor for a male mammal is performed with the equation

$F_m = (T \times P) / (S \times N)$; and

wherein E is estrogen serum concentration; S is sex hormone-binding globulin serum concentration; Q is a conversion factor; N is fasting insulin serum concentration; T is testosterone serum concentration; and P is a conversion factor.

2. The method of claim 1, wherein Q is 0.02.

3. The method of claim 1, wherein P is equal to the product of 0.5 nmol/L times the fasting insulin serum concentration.

4. A method for treating a hormone disorder in a mammal, comprising:

(i) receiving a serum sample from the mammal;

(ii) measuring the concentration of insulin, estrogen, testosterone, and sex hormone-binding globulin in the serum;

(iii) determining an F factor; and

(iv) administering to the mammal a hormone disorder-effective amount of a therapeutic agent that comprises at least one of insulin, an estrogenic hormone, a steroid in the testosterone synthetic pathway, a sex hormone-binding globulin, an insulin inhibiting agent, an estrogen inhibiting agent, a testosterone inhibiting agent, a sex hormone-binding globulin inhibiting agent, a pharmaceutical agent that increases the serum concentration of estrogen, a pharmaceutical agent that

increases the serum concentration of testosterone, a pharmaceutical agent that increases the serum concentration of sex hormone-binding globulin, and a pharmaceutical agent that increases the serum concentration of insulin in the mammal; and all salts, esters, amides, enantiomers, isomers, tautomers, prodrugs and derivatives thereof;

wherein determining the F factor for a female mammal is performed with the equation

$F_f = (E \times S \times Q) / N$;

wherein determining the F factor for a male mammal is performed with the equation

$F_m = (T \times P) / (S \times N)$; and

wherein E is estrogen serum concentration; S is sex hormone-binding globulin serum concentration; Q is a conversion factor; N is fasting insulin serum concentration; T is testosterone serum concentration; and P is a conversion factor.

5. The method of claim 4, wherein the conversion factor Q is 0.02.

6. The method of claim 4, wherein the conversion factor P is equal to the product of 0.5 nmol/L times the fasting insulin serum concentration.

7. The method of claim 4, wherein the hormone disorder is associated with, or related to, a disease, wherein the disease comprises at least one of cardiovascular disease, Alzheimer's disease, dementia, cataracts, hypogonadism, sexual dysfunction, hypercholesterolemia, diabetic retinopathy, hyperinsulinemia, hyperglycemia, hypertension, obesity, osteoporosis, osteopenia, vaginal dryness, thinning of the vaginal wall, menopausal symptoms and hot flashes, cognitive dysfunction, and cancer.

8. The method of claim 7, wherein the cancer comprises at least one of cervical cancer, uterine cancer, and breast cancer.

9. The method of claim 4, wherein the therapeutic agent is administered once.

10. The method of claim 4, wherein the therapeutic agent is administered multiple times.

11. The method of claim 4, wherein the therapeutic agent is administered orally, percutaneously, transmucosally, by implantation, by inhalation, rectally, vaginally, topically, buccally, or parenterally.

12. The method of claim 11, wherein the buccal administration comprises sublingual administration.

13. The method of claim 11, wherein the parenteral administration comprises subcutaneous, intramuscular, intravenous, intramedullary, infusion, or intradermal administration.

14. The method of claim 4, wherein the mammal is a human.

15. The method of claim 14, wherein the insulin serum concentration decreases as compared to the concentration level before administration of the therapeutic agent.

16. The method of claim 14, wherein the human is female.

17. The method of claim 16, wherein the sex hormone-binding globulin serum concentration is increased as compared to the concentration level before administration of the therapeutic agent.

18. The method of claim 14, wherein the human is male.

19. The method of claim 18, wherein the sex hormone-binding globulin serum concentration is lowered as compared to the concentration level before administration of the therapeutic agent.

20. A method for treating a disorder associated with, or related to, a hormone disorder in a mammal, comprising:

(i) receiving a serum sample from the mammal;

(ii) measuring the concentration of insulin, estrogen, testosterone, and sex hormone-binding globulin in the serum;

(iii) determining an F factor; and

(iv) administering to the mammal a hormone disorder-effective amount of a therapeutic agent that comprises at least one of insulin, an estrogenic hormone, a steroid in the testosterone synthetic pathway, a sex hormone-binding globulin, an insulin inhibiting agent, an estrogen inhibiting agent, a testosterone inhibiting agent, a sex hormone-binding globulin inhibiting agent, a pharmaceutical agent that increases the serum concentration of estrogen, a pharmaceutical agent that increases the serum concentration of testosterone, a pharmaceutical agent that increases the serum concentration of sex hormone-binding globulin, and a pharmaceutical agent that increases the serum concentration of insulin in the mammal; and/or salts, esters, amides, enantiomers, isomers, tautomers, prodrugs and derivatives thereof;

wherein determining the F factor for a female mammal is performed with the equation

$F_f = (E \times S \times Q) / N$;

wherein determining the F factor for a male mammal is performed with the equation

$F_m = (T \times P) / (S \times N)$; and

wherein E is estrogen serum concentration; S is sex hormone-binding globulin serum concentration; Q is a conversion factor; N is fasting insulin serum concentration; T is testosterone serum concentration; and P is a conversion factor.

21. The method of claim 20, wherein the conversion factor Q is 0.02.

22. The method of claim 20, wherein the conversion factor P is equal to the product of 0.5 nmol/L times the fasting insulin serum concentration.

23. The method of claim 20, wherein the disorder associated with, or related to, a hormone disorder comprises at least one of cardiovascular disease, Alzheimer's disease, dementia, cataracts, hypogonadism, sexual dysfunction, hypercholesterolemia, diabetic retinopathy, hyperinsulinemia, hyperglycemia, hypertension, obesity, osteoporosis, osteopenia,

vaginal dryness, thinning of the vaginal wall, menopausal symptoms and hot flashes, cognitive dysfunction, and cancer.

24. The method of claim 23, wherein the cancer comprises at least one of cervical cancer, uterine cancer, and breast cancer.

25. The method of claim 20, wherein the therapeutic agent is administered once.

26. The method of claim 20, wherein the therapeutic agent is administered multiple times.

27. The method of claim 20, wherein the therapeutic agent is administered orally, percutaneously, transmucosally, by implantation, by inhalation, rectally, vaginally, topically, buccally, or parenterally.

28. The method of claim 27, wherein the buccal administration comprises sublingual administration.

29. The method of claim 27, wherein the parenteral administration comprises subcutaneous, intramuscular, intravenous, intramedullary, infusion, or intradermal administration.

30. The method of claim 20, wherein the mammal is a human.

31. The method of claim 30, wherein the insulin serum concentration decreases as compared to the concentration level before administration of the therapeutic agent.

32. The method of claim 30, wherein the human is female.

33. The method of claim 32, wherein the sex hormone-binding globulin serum concentration is increased as compared to the concentration level before administration of the therapeutic agent.

34. The method of claim 30, wherein the human is male.

35. The method of claim 34, wherein the sex hormone-binding globulin serum concentration is lowered as compared to the concentration level before administration of the therapeutic agent.

36. A method for restoring hormone balance in a mammal in need thereof comprising:

(i) receiving a serum sample from the mammal;

(ii) measuring the concentration of insulin, estrogen, testosterone, and sex hormone-binding globulin in the serum;

(iii) determining an F factor; and

(iv) administering to the mammal a hormone disorder-effective amount of a therapeutic agent that comprises at least one of insulin, an estrogenic hormone, a steroid in the testosterone synthetic pathway, a sex hormone-binding globulin, an insulin inhibiting agent, an estrogen inhibiting agent, a testosterone inhibiting agent, a sex hormone-binding globulin inhibiting agent, a pharmaceutical agent that increases the serum concentration of estrogen, a pharmaceutical agent that increases the serum concentration of testosterone, a pharmaceutical agent that increases the serum concentration of sex hormone-binding globulin, and a pharmaceutical agent that increases the serum concentration of insulin in the mammal; and salts, esters, amides, enantiomers, isomers, tautomers, prodrugs and derivatives thereof;

wherein determining the F factor for a female mammal is performed with the equation

$F_f = (E \times S \times Q) / N$;

wherein determining the F factor for a male mammal is performed with the equation

$F_m = (T \times P) / (S \times N)$; and

wherein E is estrogen serum concentration; S is sex hormone-binding globulin serum concentration; Q is a conversion factor; N is fasting insulin serum concentration; T is testosterone serum concentration; and P is a conversion factor.

37. The method of claim 36, wherein the conversion factor Q is 0.02.

38. The method of claim 36, wherein the conversion factor P is equal to the product of 0.5 nmol/L times the fasting insulin serum concentration.

39. The method of claim 36, wherein the disorder associated with, or related to, a hormone disorder comprises at least one of cardiovascular disease, Alzheimer's disease, dementia, cataracts, hypogonadism, sexual dysfunction, hypercholesterolemia, diabetic retinopathy, hyperinsulinemia, hyperglycemia, hypertension, obesity, osteoporosis, osteopenia, vaginal dryness, thinning of the vaginal wall, menopausal symptoms and hot flashes, cognitive dysfunction, and cancer.

40. The method of claim 39, wherein the cancer comprises at least one of cervical cancer, uterine cancer, and breast cancer.

41. The method of claim 36, wherein the therapeutic agent is administered once.

42. The method of claim 36, wherein the therapeutic agent is administered multiple times.

43. The method of claim 36, wherein the therapeutic agent is administered orally, percutaneously, transmucosally, by implantation, by inhalation, rectally, vaginally, topically, buccally, or parenterally.

44. The method of claim 43, wherein the buccal administration comprises sublingual administration.

45. The method of claim 43, wherein the parenteral administration comprises subcutaneous, intramuscular, intravenous, intramedullary, infusion, or intradermal administration.

46. The method of claim 36, wherein the mammal is a human.

47. The method of claim 36, wherein the insulin serum concentration decreases as compared to the concentration level before administration of the therapeutic agent.

48. The method of claim 36, wherein the human is female.

49. The method of claim 48, wherein the sex hormone-binding globulin serum concentration is increased as compared to the concentration level before administration of the therapeutic agent.

50. The method of claim 36, wherein the human is male.

51. The method of claim 50, wherein the sex hormone-binding globulin serum concentration is lowered as compared to the concentration level before administration of the therapeutic agent.

52. A kit for treating a hormone disorder in a mammal, comprising: a hormone disorder-effective amount of a therapeutic agent, the therapeutic agent comprising at least one of insulin, an estrogenic hormone, a steroid in the testosterone synthetic pathway, a sex hormone-binding globulin, an insulin inhibiting agent, an estrogen inhibiting agent, a testosterone inhibiting agent, a sex hormone-binding globulin inhibiting agent, a pharmaceutical agent that increases the serum concentration of estrogen, a pharmaceutical agent that increases the serum concentration of testosterone, a pharmaceutical agent that increases the serum concentration of sex hormone-binding globulin, and a pharmaceutical agent that increases the serum concentration of insulin in the mammal; and salts, esters, amides, enantiomers, isomers, tautomers, prodrugs and derivatives thereof.

53. The kit of claim 52, wherein the hormone disorder is associated with, or related to, a disease, the disease comprising at least one of cardiovascular disease, Alzheimer's disease, dementia, cataracts, hypogonadism, sexual dysfunction, hypercholesterolemia, diabetic retinopathy, hyperinsulinemia, hyperglycemia, hypertension, obesity, osteoporosis, osteopenia, vaginal dryness, thinning of the vaginal wall, menopausal symptoms and hot flashes, cognitive dysfunction, and cancer.

54. The method of claim 52, wherein the cancer comprises at least one of cervical cancer, uterine cancer, and breast cancer.

55. The kit of claim 52, wherein the therapeutic agent is administered once.

56. The kit of claim 52, wherein the therapeutic agent is administered multiple times.

57. The kit of claim 52, wherein the therapeutic agent is administered orally, percutaneously, transmucosally, by implantation, by inhalation, rectally, vaginally, topically, buccally, or parenterally.

58. The kit of claim 57, wherein the buccal administration comprises sublingual administration.

59. The kit of claim 57, wherein the parenteral administration comprises subcutaneous, intramuscular, intravenous, intramedullary, infusion, or intradermal administration.

60. The kit of claim 52, wherein the mammal is a human.

61. The kit of claim 60, wherein the insulin serum concentration decreases as compared to the concentration level before administration of the therapeutic agent.

62. The kit of claim 60, wherein the human is female.

63. The kit of claim 62, wherein the sex hormone-binding globulin serum concentration is increased as compared to the concentration level before administration of the therapeutic agent.

64. The kit of claim 52, wherein the human is male.

65. The kit of claim 64, wherein the sex hormone-binding globulin serum concentration is lowered as compared to the concentration level before administration of the therapeutic agent.